

IN THE CLAIMS

1. - 37. (cancelled)

38. (previously amended) In a recoil buffering apparatus for use with an artillery gun of a type mounted on a support platform and including a breech assembly connected to a barrel, the breech assembly having a firing mechanism for firing a projectile through an open end of the barrel, the improvements comprising:

a) at least two recoil buffering cylinders engaged to and to move in unison with said barrel during recoil action of the barrel caused by the firing of the projectile, each said at least two recoil buffering cylinders oriented to have its longitudinal direction parallel to that of said barrel,

b) a piston and piston rod assembly for each of said at least two recoil buffering cylinder,

wherein said piston of each said assembly is slidably engaged within its respective recoil buffering cylinder, and

wherein said piston rod of each said assembly is secured to said support platform, the engagement of each assembly with its respective recoil buffering cylinder providing a first means of support to said at least two recoil buffering cylinders from said support platform,

c) a second means of support by which said at least two recoil buffering cylinders are supported from said support platform, said second means of support including an aperture for each of said at least two recoil buffering cylinders to extend through and relative to which said at least two recoil buffering cylinder can slide to be guided during recoil action of the barrel in a direction parallel to the longitudinal direction of said barrel,

wherein said barrel is supported by said first means of support via said at least two recoil buffering cylinders and second means of support above said support platform in a manner so that no direct contact with said support platform by said barrel will be made, and

wherein during recoil action of the barrel a buffering action between the piston and its respective recoil buffering cylinder will transmit recoil force, via said piston rods to said support platform, whilst the sliding action between said second means of support and said at least two buffering cylinder allows said second means of support to remain stationary and unsubjected to the recoiling force in said longitudinal direction.

~~39.~~² (previously added) A recoil buffering apparatus as claimed in claim ~~38~~¹ wherein said barrel is to be located between said at least two recoil buffering cylinders.

~~40.~~³ (previously added) A recoil buffering apparatus as claimed in claim ~~38~~¹ wherein said second means of support includes a cradle member having an aperture there through for each said recoil buffering cylinders, with and through which each said recoil buffering cylinder is slidably engaged at the exterior cylindrical surface of said recoil buffering cylinder to be guided during recoil in the longitudinal direction.

~~41.~~⁴ (previously added) A recoil buffering apparatus as claimed in claim ~~40~~³ wherein said second means of support includes two support arms, each engaged to said cradle and to extend between said cradle and said support platform.

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42. (currently amended) A recoil buffering apparatus as claimed in claim 41 wherein said two support arms are when engaged to said support platform, directed from said cradle in a downward and a ~~forward~~ rearward direction (~~firing direction~~) and are splayed outwardly from each other to be engaged to said support platform a distance wider apart than where said two support arms are engaged to said cradle.

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43. (previously added) A recoil buffering apparatus as claimed in claim 41 wherein, two further support arms are provided each engaged to said cradle and to extend between said support platform and said cradle, said two further support arms being parallel to said piston rods and said recoil buffering cylinders.

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44. (currently amended) A recoil buffering apparatus as claimed in claim 38 wherein said piston rods are ~~to be~~ pivotally secured to said support platform about a ~~vertical~~ horizontal pivot axis, said second means of support being engaged to said support platform in a manner to allow traversing movement thereof about ~~the vertical~~ said horizontal pivot axis ~~of~~ for said piston rods to allow directional aiming of said barrel.

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45. (currently amended) A recoil buffering apparatus as claimed in claim 40 wherein a yoke is provided for engaging each said recoil buffering cylinders to said barrel at or proximate, the forward most (~~in the direction of firing~~) end of each said recoil buffering cylinder, said cradle slidably engages each said recoil buffering cylinders intermediate of said yoke and second region where each recoil buffering cylinder is engaged to said barrel.

7⁷ 46. (previously added) A recoil buffering apparatus as claimed in claim 41⁴ wherein said support arms are telescopic support arms adjustable in length, wherein with each said piston rod assembly pivotally engageable to said support platform about a horizontal axis, said telescopic arms are able to vary the elevation of the barrel.

11¹¹ 47. (currently amended) An artillery gun assembly comprising
a barrel with a breech assembly, the breech assembly having a firing mechanism for firing a projectile through an open end of the barrel,
a support platform by which said barrel is supported
a recoil buffering assembly comprising
a) at least two recoil buffering cylinders engaged to and to move in unison with said barrel during recoil action of the barrel caused by the firing of the projectile, each said at least two recoil buffering cylinders oriented to have its longitudinal direction parallel to that of said barrel,
b) a piston and piston rod assembly for each of said at least two recoil buffering cylinder,
wherein said piston of each said assembly is slidably engaged within its respective recoil buffering cylinder, and
wherein said piston rod of each said assembly is secured to said support platform, the engagement of each assembly with its respective recoil buffering cylinder providing a first means of support to said at least two recoil buffering cylinders from said support platform,
c) a second means of support by which said at least two recoil buffering cylinders are supported from said support platform, said second means of support including an aperture

for each of said at least two recoil buffering cylinders to extend through and relative to which said at least two recoil buffering cylinder can slide to be guided during recoil action of the barrel in a direction parallel to the longitudinal direction of said barrel,

wherein said barrel is supported by said first means of support via said at least two recoil buffering cylinders and second means of support above said support platform in a manner so that no direct contact with said support platform by said barrel will be made, and

wherein during recoil action of the barrel a buffering action between the piston and its respective recoil buffering cylinder will transmit recoil force via said piston rods to said support platform, whilst the sliding action between said second means of support and said at least two buffering cylinder allows said second means of support to remain stationary and un- subjected to the recoiling force in said longitudinal direction.

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~~48.~~¹² (previously added) A recoil buffering apparatus as claimed in claim ~~47~~¹¹ wherein said barrel is located between said at least two recoil buffering cylinders.

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~~49.~~¹³ (previously added) A recoil buffering apparatus as claimed in claim ~~47~~¹¹ wherein said second means of support includes a cradle member having an aperture there through for each said recoil buffering cylinders, with and through which each said recoil buffering cylinder is slidably engaged at the exterior cylindrical surface of said recoil buffering cylinder to be guided during recoil, in the longitudinal direction.

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50. (currently amended) A recoil buffering apparatus as claimed in claim 49 wherein
said second means of support includes two support arms each engaged to and extending
between said cradle and said support platform.

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51. (previously added) A recoil buffering apparatus as claimed in claim 50 wherein
said two support arms are directed from said cradle in a downward and ~~a forward~~ ^{rearward} direction
(~~firing direction~~) and are splayed outwardly from each other to be engaged to said support
platform a distance wider apart than where said two support arms are engaged to said cradle.

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52. (previously added) A recoil buffering apparatus as claimed in claim 50 wherein,
two further support arms are provided each engaged to and extending between said support
platform and said cradle, said two further support arms being parallel to said piston rods and
said recoil buffering cylinders.

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53. (currently amended) A recoil buffering apparatus as claimed in claim 50 wherein
said piston rods are ~~to be~~ pivotally secured to said support platform about a ~~vertical~~ horizontal
pivot axis, said second means of support being engaged to said support platform in a manner
to allow traversing movement thereof about ~~the vertical~~ said horizontal pivot axis ~~of for~~ said
piston rods to allow directional aiming of said barrel.

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54. (currently amended) A recoil buffering apparatus as claimed in claim 49 wherein
said recoil buffering cylinders are engaged to said barrel at or proximate to each distal end of
each said recoil buffering cylinder, the forward most (~~in the direction of firing~~) end of each

said recoil buffering cylinders being engaged via a yoke and wherein said cradle slidably engages each said recoil buffering cylinders intermediate of said yoke wherein each recoil suffering cylinder is engaged to said barrel.

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~~55.~~ (previously added) A recoil buffering apparatus as claimed in claim ~~50~~¹⁴ wherein said support arms are telescopic support arms adjustable in length, wherein with each said piston rod assembly pivotally engaged to said support platform about a horizontal axis, said telescopic arms are able to vary the elevation of the barrel.

E1 19.
~~56.~~ (previously amended) An artillery gun for mounting on a support platform, said gun comprising

- a) a barrel with a breech assembly, the breech assembly having a firing mechanism for firing a projectile through an open end of the barrel,
- b) a recoil buffering assembly comprising
 - a. at least two recoil buffering cylinders engaged to and to move in unison with said barrel during recoil action of the barrel caused by the firing of the projectile, each said at least two recoil buffering cylinders oriented to have its longitudinal direction parallel to that of said barrel,
 - b. a piston and piston rod assembly for each of said at least two recoil buffering cylinder,
wherein said piston of each said assembly is slidably engaged within its respective recoil buffering cylinder, and
wherein said piston rod of each said assembly is for securing to a

support platform, the engagement of each assembly with its respective recoil buffering cylinder providing a first means of support to said at least two recoil buffering cylinders from said support platform,

- 15 c. a second means for supporting by which said at least two recoil buffering cylinders from said support platform, said second means of support including an aperture for each of said at least two recoil buffering cylinders to extend through and relative to which said at least two recoil buffering cylinder can slide to be guided during recoil action of the barrel in a direction parallel to the longitudinal direction of said barrel,

wherein, when so secured to said support platform, said barrel is supported by said first means of support via said at least two recoil buffering cylinders and second means of support above said support platform in a manner so that no direct contact with said support platform by said barrel will be made, and

wherein during recoil action of the barrel a buffering action between the piston and its respective recoil buffering cylinder will transmit recoil force via said piston rods to said support platform, whilst the sliding action between said second means of support and said at least two buffering cylinder allows said second means of support to remain stationary and unsubjected to the recoiling force in said longitudinal direction.

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51. (previously added) A recoil buffering apparatus as claimed in claim 56 wherein
said barrel is located between said at least two recoil buffering cylinders.

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58. (previously added) A recoil buffering apparatus as claimed in claim 57 wherein
said second means of support includes a cradle member having an aperture there through for
each said recoil buffering cylinders, with and through which each said recoil buffering
cylinder is slidably engaged at the exterior cylindrical surface of said recoil buffering cylinder
to be guided during recoil, in the longitudinal direction.

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59. (previously added) A recoil buffering apparatus as claimed in claim 58 wherein
said second means of support includes two support arms each engaged to said cradle and to
extend between said cradle and said support platform.

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60. (previously added) A recoil buffering apparatus as claimed in claim 59 wherein
said two support arms, when engaged to said support platform, are directed from said cradle
in a downward and a ^{rearward} ~~forward~~ direction (~~firing direction~~) and are splayed outwardly from each
other to be engaged to said support platform a distance wider apart than where said two
support arms are engaged to said cradle.

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61. (previously added) A recoil buffering apparatus as claimed in claim 59 wherein,
two further support arms are provided each engaged to said cradle and to extend between said
support platform and said cradle, said two further support arms being parallel to said piston
rods and said recoil buffering cylinders.

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62.

(currently amended)

A recoil buffering apparatus as claimed in claim ~~56~~¹⁹ wherein

said piston rods are ~~to be~~ pivotally secured to said support platform about a ~~vertical~~ horizontal pivot axis, said second means of support being engaged to said support platform in a manner to allow traversing movement thereof about ~~the vertical~~ said horizontal pivot axis ~~of for~~ said piston rods to allow directional aiming of said barrel.

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63.

(currently amended)

A recoil buffering apparatus as claimed in claim ~~58~~²¹ wherein

each said recoil buffering cylinders are engaged to said barrel at or proximate to each distal end of each said recoil buffering cylinder, the forward most (~~in the direction of firing~~) end of each said recoil buffering cylinders being engaged via a yoke and wherein said cradle slidable engages each said recoil buffering cylinders intermediate of said yoke and where each recoil buffering cylinder is engaged to said barrel.

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64.

(previously added)

A recoil buffering apparatus as claimed in claim ~~59~~²² wherein

said support arms are telescopic support arms adjustable in length, wherein with each said piston rod assembly pivotally engageable to said support platform about a horizontal axis, said telescopic arms are able to vary the elevation of the barrel.